

**Notice of Allowability**

Application No.

10/827,229

Applicant(s)

KAU, SHING P.

Examiner

Art Unit

TAN Q. NGUYEN

3661

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 04/19/2004.
2. ☒ The allowed claim(s) is/are 1-32.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 11/07/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

TAN Q. NGUYEN  
PRIMARY EXAMINER

### **EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE**

1. This communication is an Examiner's reasons for allowance in response to application filed on April 19, 2004, assigned serial 10/827,229 and titled "ALIGNMENT OF A FLIGHT VEHICLE BASED ON RECURSIVE MATRIX INVERSION".

2. The following is the Examiner's statement of reasons for the indication of allowable subject matter:

a. After carefully reviewing the application in light of the prior art of record, the amended claims and additional search of all the possible areas relevant to the present application, a set of related prior art references has been found, but those prior art references are not deemed strong to make the application unpatentable. Thus, it is found that the application is now in condition for allowance.

b. Although the prior art disclose several claimed limitations, none of the references teaches a method, system and a machine readable medium for determining alignment of a flight vehicle during flight which includes the steps of generating two flight dynamics or trajectory data in a reference coordinate frame and in a second coordinate frame at a plurality of points in time during the flight, and at each point in time, constructing a first matrix based on the two flight dynamics or trajectory data in the reference coordinate frame at that time, constructing a second matrix based on the two flight dynamics or trajectory data in the second coordinate frame at that time, modifying a first accumulation matrix based on the first matrix and the second matrix, modify a second accumulation matrix based on the second matrix, inverting the first accumulation matrix, and determining an alignment output based on the inverted first accumulation matrix and the second accumulation matrix (see claims 1, 7, 8, 14, 20, 26 and 27).

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c. Claims 1-32 are allowable over the prior art of record.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Tan Nguyen, whose telephone number is (703) 305-9755. The examiner can normally be reached on Monday-Thursday from 5:30 AM-4:00 PM

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black, can be reached on (703) 305-8233.

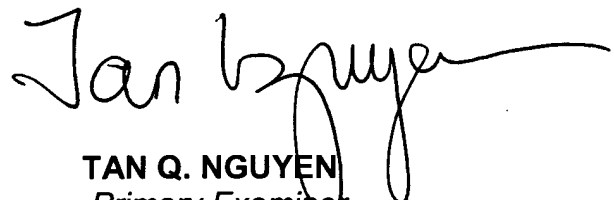
Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed to the Central Fax: (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/tqn  
March 18, 2006

  
**TAN Q. NGUYEN**  
Primary Examiner  
Art Unit 3661



**UNITED STATES DEPARTMENT OF COMMERCE**

**U.S. Patent and Trademark Office**

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER
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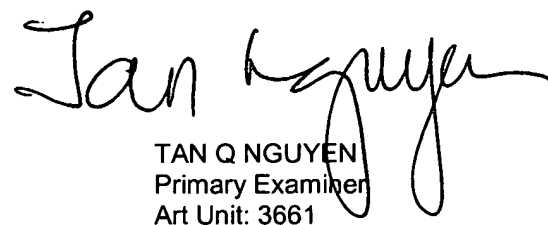
ART UNIT	PAPER
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DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

  
TAN Q NGUYEN  
Primary Examiner  
Art Unit: 3661